



BSI Standards Publication

**Specification for residual  
current devices with or  
without overcurrent  
protection for socket-outlets  
for household and similar  
uses**

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#### Summary of pages

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## Foreword

### Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 November 2016. It was prepared by Subcommittee PEL/23/1, *Circuit breakers and similar equipment for household use*, under the authority of Technical Committee PEL/23, *Electrical accessories*. A list of organizations represented on these committees can be obtained on request to their secretary.

### Supersession

This British Standard supersedes BS 7288:1990, which remains current until 30 November 2019.

### Relationship with other publications

This revision implements IEC 62640 with the common modification applied by HD 62640.

### Information about this document

This standard reproduces the text of IEC 62640 with the common modifications set out in HD 62640 applied (this is why parts are labelled “void”) and certain necessary requirements retained from BS 7288:1990. The key differences between this edition of BS 7288 and IEC 62640 (with the common modifications) are set out in Annex F.

Where IEC 62640 text has been deleted as part of this revision, the words “Text deleted” have been inserted to indicate this.

This standard specifies requirements for socket-outlets incorporating residual current devices (SRCDs).

This edition covers the use of the following types of SRCDs:

- a) single pole with switched neutral;
- b) double pole;
- c) single pole with solid neutral.

### Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

### Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

### Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a British Standard cannot confer immunity from legal obligations.**

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## 0 Introduction

The BS EN 61008 and BS EN 61009 series are applicable to residual current devices having one to four poles used in any part of an electrical installation. These devices may be installed either at the origin of a whole installation or upstream of one or several circuits of a fixed installation or upstream of a circuit powering one or more socket-outlets, or be integrated in the same enclosure as a socket-outlet.

Such residual current devices are able to provide fault protection (protection against indirect contact), additional protection (protection against direct contact) if the rated residual current is equal to or less than 30 mA and protection against fire hazard due to a persistent earth leakage current without the operation of the overcurrent protection. Equipment meeting the requirements of the BS EN 61008 or BS EN 61009 series ensures isolation, withstands high levels of electromagnetic disturbances for household and similar applications, and allows safe use of an electrical installation.

Although the BS EN 61008 and BS EN 61009 series may be applicable to "residual current devices integrated in socket-outlets" it is acknowledged that due to the specific use and location of a socket-outlet, at the boundary of the fixed installation and immediately upstream of electrical equipment powered through a plug inserted into the socket-outlet, these devices require different features.

The residual current device at socket-outlet level is normally intended to be installed by skilled or instructed persons. It can be operated several times per day. The isolation function is not necessary since pulling out the plug from the socket-outlet is recognized as providing effective isolation. The absence of permanently connected long conductors downstream of the RCD, together with a limited number of powered appliances, justifies reduced EMC levels. Residual current devices covered by this standard are intended for additional protection in case of direct contact only. These particular features having been considered, it was recognized that a dedicated standard for socket-outlet residual current devices (SRCDs) was necessary.

## 1 Scope

This British Standard applies to residual current-operated devices (RCD) incorporated in, or specifically intended for use with, single pole and neutral and single pole and switched neutral and double pole socket-outlets, with provision of earthing of the socket-outlet for household and similar uses (SRCD: socket-outlet residual current devices). SRCDs, according to this standard, are intended to be used in single phase systems such as phase to neutral. SRCDs are only intended to provide supplementary protection downstream of the SRCD. SRCDs are intended for use in circuits where the fault protection and additional protection are already assured upstream of the SRCD.

*NOTE 1* Void

*NOTE 2* Void

*NOTE 3* Void

SRCDs are neither intended to provide an isolation function nor intended to be used in IT systems.

*NOTE 4* For SRCDs intended to provide isolation or fault protection, or to be used in IT systems, BS EN 61008-1 or BS EN 61009-1 should be used, as applicable, in conjunction with the requirements of BS 1363-2 for socket-outlets.

*NOTE 5* Requirements and testing for SRCDs intended to be used in IT systems are under consideration.